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DEC 9 - 1987

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Federal Communications Commission
Office of the Secretary

In the Matter of

Petition to Amend Part 68 of the
Commission's Rules to Include
Terminal Equipment Connected to
Public Switched Digital Service

93-268
RM-6147

OPPOSITION OF THE MOUNTAIN STATES TELEPHONE
AND TELEGRAPH COMPANY, NORTHWESTERN BELL TELEPHONE
COMPANY AND PACIFIC NORTHWEST BELL TELEPHONE COMPANY

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December 9, 1987

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OPPOSITION

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The Mountain States Telephone and Telegraph Company,
Northwestern Bell Telephone Company and Pacific Northwest Bell
Telephone Company ("MTN, NWB and PNB") submit this Opposition
to the Rulemaking Petition filed by the Ameritech Operating
Companies ("Ameritech"), which seeks to expand the scope of
Part 68 to encompass customer premises equipment ("CPE") con-
nected to public switched digital services.^{1/}

I. SUMMARY OF OPPOSITION

As demonstrated below, rulemaking is inappropriate because
the claim of network harm has not been demonstrated -- either in
its severity or likelihood of occurrence. Nor has it been shown
that the proposed rules would eliminate the alleged harm.

The Commission should decline to entertain the Ameritech
Petition until an appropriate industry standards group such as

^{1/} See Public Notice, Report No. 1689, released November 9,
1987.

Committee T1 has had an opportunity to review the subject and, following application of its consensus procedures, to make its own recommendations. The proposals the Commission is being asked to codify in Part 68 are technology and media dependent, would sanction CPE incompatibility and would preclude use of a new technology, whose CPE apparently does not present the same concerns of network harm.

II. BACKGROUND

Public switched digital service ("PSDS") is a switched service offering providing an end user with the capability of establishing a digital circuit for transporting voice or, more commonly today, data. Northwestern Bell has been providing this service on a limited basis for over a year.^{2/}

In 1985, Bell Communications Research ("Bellcore") devised proposed specifications for PSDS. Bellcore's proposal reflected the two PSDS products then available in the market:

- AT&T's Circuit Switched Digital Capability ("CSDC"), designed for use with its analog 1AESS switch; and
- Northern Telecom's Datapath feature, designed for use with its digital DMS-100 switch.

While there are similarities between the two products (e.g., they both use time compression multiplexing over a two-wire

^{2/} See MTN, NWB and PNB Tariff F.C.C. No. 1, § 6.3.1(s).

subscriber line), their transmission, protocol and signaling schemes are so different that CPE designed to work with CSDC is not compatible with Datapath, and vice versa.^{3/}

Now, over two years after Bellcore developed its proposed specifications, Ameritech asks the Commission to incorporate them into Part 68. In support, it states that (a) the proposed amendments cover "the two existing digital technologies" and (b) it is "anticipated that any future technologies developed for PSDS will comply with these proposed revisions to Part 68."^{4/} Both observations are inaccurate.

Integrated Network Corporation ("INC") has recently introduced a product -- Universal Switched Digital Capability ("USDC") -- which provides yet another method for offering PSDS. This new product is promising because, among other things, it is designed to work with any stored program controlled switch (e.g., 1AESS or DMS-100) and uses a four-wire network interface at a customer's location. The latter feature provides end users with a greater selection of CPE from more vendors, including CPE which can be used with the digital services offered by inter-exchange carriers (e.g., AT&T's ACCUNET service).^{5/} It would appear that Ameritech would have the Commission codify the cus-

^{3/} At one time, these differences were so great as to preclude transmissions from one system to another. Both vendors modified their systems so that call compatibility between switches now exists.

^{4/} Ameritech Petition at 2.

^{5/} INC's product can already be used with CPE manufactured by AT&T, California Microwave, INC, Kentrox, General Data Communications, and Universal Data Systems.

tomer/network interface for PSDS as a "two wire interface."^{6/} INC's product, however, uses a four-wire interface.

III. RULEMAKING IS INAPPROPRIATE BECAUSE THE CLAIM OF NETWORK HARM HAS NOT BEEN SUPPORTED

The Commission determined long ago that the public interest is best served if American consumers are given the freedom to attach to a public switched telecommunications network CPE of their own choosing.^{7/} The only limitation imposed on this right of access is CPE that causes "harms to the network."^{8/} Specifications protecting public switched networks from harm caused by the connection of CPE have traditionally been codified in Part 68 of the Commission's rules.^{9/}

Because Part 68 infringes upon a user's right to connect CPE, the Commission has held that a party seeking to expand the scope of Part 68 bears a heavy burden of demonstrating "actual network harm, or at least of the substantial probability of

^{6/} Proposed Rule 68.3, at Appendix A-4. See also A-5 and A-7.

^{7/} Indeed, it was over three decades ago that a federal court held that end users have a "right reasonably to use his [CPE] in ways which are privately beneficial without being publicly detrimental." Hush-A-Phone Corp. v. United States, 238 F.2d 266, 269 (D.C. Cir. 1956).

^{8/} Network harms are defined as "[e]lectrical hazards to telephone company personnel, damage to telephone company equipment, malfunction of telephone company billing equipment, and degradation of service to persons other than the user of the subject terminal equipment, his calling or called party." 47 C.F.R. § 69.3.

^{9/} See 47 C.F.R. § 68.1

network harm."^{10/} The Commission has, moreover, held that in most instances the harm must be "significant."^{11/}

Ameritech asserts that the rules it proposes are necessary "to protect the network from harm."^{12/} The harm it identifies is crosstalk.^{13/} Ameritech does not, however, attempt to quantify this harm, nor does it attempt to demonstrate how its proposed rules will "assur[e] that the network is protected" from crosstalk.^{14/}

In considering this harms issue, it is important for the Commission to put Ameritech's proposals in context. First, as noted above, the proposals are technology dependent -- that is, they were designed to accommodate only Northern Telecom's Datapath and AT&T's CSDC products. Thus, incorporation of the proposals into Part 68 could have the effect of precluding registration of certain, apparently harmless CPE (e.g., INC's USDC units). Such action would also have the effect of officially

^{10/} Fourth Report, CC Docket No. 81-216, FCC 86-352, released August 21, 1986, at ¶¶ 9-11, summarized in 51 Fed. Reg. 31149 (Sept. 2, 1986).

^{11/} See, e.g., Modification of Section 68.318(b), CC Docket No. 86-423, FCC 87-318, released October 23, 1987, at ¶ 18 ("Section 68.318 Order").

^{12/} Ameritech Petition at 1.

^{13/} Id. at 5. Ameritech also apparently suggests there may be a harm relating to billing equipment, given its proposal to amend Section 68.314. Id. It does not, however, identify the harm which can be generated to justify its proposed amendment. For example, it is MTN, NWB and PNB's understanding that the two second delay Ameritech proposes to require in its amended Section 68.314 is not required by Datapath.

^{14/} Id. at 6.

discouraging PSDS compatibility because Datapath CPE will not work with CSDC CPE and Part 68 registration will give vendors little incentive to develop a technology independent interface.

Second, the proposals are media dependent. The concern about crosstalk is potentially a problem when copper pairs are used in the provision of PSDS; potential problems are eliminated with the use of other media such as optical fiber and radio and minimized with the use of carrier systems. Adoption of the proposal would, therefore, "interfere with the achievement of a single interface specification for [PSDS] that could accommodate [multiple] transmission media, should industry groups determine that a single interface specification is desireable."^{15/}

Ameritech would give the impression in its Petition that crosstalk will be prevented by ensuring that Datapath and CSDC CPE is designed with proper signal power limitations and with proper frequency or pulse density specifications.^{16/} This is not necessarily the case. Crosstalk can also be generated by improper administration of the copper distribution plant (e.g.,

^{15/} Section 68.318 Order, note 11 supra, at ¶ 13. Working Group T1C1.3 of the Committee T1 considered this issue in 1985. See Standard for a Circuit Switched Digital Carrier to Customer Installation Interface, Project Proposal T1C1/84-017, submitted September 20, 1984. It was determined at the time that the Working Group would not attempt to develop a single standard based on the Northern Telecom and AT&T technologies then available. The Working Group has not, however, reexamined the issue since the introduction of the INC alternative.

^{16/} Virtually all Datapath and CSDC CPE is manufactured by Northern Telecom and AT&T respectfully. Ameritech does not allege that AT&T and Northern Telecom have misdesigned their CPE.

separation of pairs within units, administration of system types within units, and synchronization of systems).

In summary, absent quantification of the alleged harm or a demonstration that the proposed rules will, in fact, eliminate the harm, the Commission should decline rulemaking. MTN, NWB and PNB submit that this burden has not been met here. Concerns about harm can be addressed by tariff revisions which either incorporate harms-based specifications or reference appropriate technical publications articulating such specifications.

IV. THE COMMISSION SHOULD REFER THE SUBJECT OF PSDS INTERFACES TO COMMITTEE T1 FOR ITS REVIEW AND RECOMMENDATION

In the past, the Commission has repeatedly referred difficult technical issues to industry standards groups for their consideration and review.^{17/} The Commission has followed

^{17/} See, e.g., International Communications Policies, 104 F.C.C.2d 208 (1986)(referring development of a domestic data numbering plan to the Committee T1); MTS and WATS Market Structure, 100 F.C.C.2d 860 (1985)(deferring to the Committee T1 development of the technical specifications for exchange carrier/interexchange carrier interface); Integrated Services Digital Network, 98 F.C.C.2d 249 (1984)(deferring to the Committee T1 development of ISDN technical standards); Docket 21182 First Report, 67 F.C.C.2d 1343 (1978)(declining to commence rulemaking because issue already pending in EIA Committee).

In fact, the Commission has historically relied on the industry forums to develop standards even before formal standards organizations were formed. See, e.g., Docket 19528 First Report on Reconsideration, 57 F.C.C.2d 1216, 1222 at ¶ 13 (1976); Docket 19528 Second Report, 58 F.C.C.2d 736, 744 at ¶ 26 (1976); Docket 20774, 41 Fed. Reg. 17307, 17308 at ¶ 4 (April 23, 1976); Docket 79-143 NPRM, 72 F.C.C.2d 330, 340 at ¶ 33 (1979). Indeed, the Commission relied on an industry "engineering conference" in developing what appears to be the (Continued on page 8)

this approach because the "adversarial written commenting process is ill-adapted to resolving complex technical issues which should be addressed by technically-trained engineers and scientists":

In our experience, their technical points and arguments are often obscured when filtered through the process of preparing formal written comments, and the give and take which represents true "communication" is often lost when structured by a process which permits only a discrete number of rounds of comments and replies.^{18/}

This procedure, the Commission has acknowledged, has "vastly reduced . . . controversy."^{19/} The most recent illustration of the success of this practice is the industry's recommendation for a domestic data numbering plan.^{20/}

Customer-network interface specifications such as those proposed by Ameritech affect data users as well as every facet of the telecommunications industry -- exchange carriers, inter-exchange carriers, value-added networks, CPE vendors and central

^{17/} (Continued from page 7)
first formal interface specifications ever established. See Use of Recording Devices, 11 F.C.C. 1033, 1056 at ¶ 8 (1947); 12 F.C.C. 1005 (1947); 12 F.C.C. 1008 (1948).

^{18/} Docket 79-143 NPRM, 72 F.C.C.2d 330, 340 at ¶ 33 (1979).

^{19/} Docket 79-143 First Report, 76 F.C.C.2d 246, 248 at n.3 (1980). Compare Section 68.318(b) Order, note 11 supra (FCC eliminates a three-year old Part 68 rule which had been adopted without the assistance of industry standards).

^{20/} See Letter from I.M. Lifchus, Chairman, Committee T1, to William J. Tricarico, Secretary, Federal Communications Commission, CC Docket No. 83-1230, dated October 7, 1987.

office switch vendors. In this diverse environment, it is imperative that the interests of all affected parties be considered in the development of interfaces. Under no circumstances should the Commission sanction one vendor's CPE (AT&T or Northern Telecom) over another's (INC).

Committee T1 was formed to develop telecommunications standards and has, the Commission has noted, the "broad base of membership" necessary to consider the PSDS network interface question.^{21/} It has further noted that Committee T1 is "governed by ANSI procedural requirements which similarly ensure fairness and openness."^{22/} MTN, NWB and PNB therefore submit that Committee T1 is the very forum which should initially review the issues raised by the Ameritech Petition.^{23/}

V. THE COMMISSION SHOULD EXPLORE THE FUTURE ROLE OF INDUSTRY STANDARDS FORUMS IN THE DEVELOPMENT OF DIGITAL INTERFACE SPECIFICATIONS

Three years ago the Commission stated that it "intends to explore whether digital terminal equipment interconnection standards may in whole or in part be established by industry

^{21/} See Integrated Services Digital Network, 98 F.C.C.2d 249, 285 (1984).

^{22/} Id. at 287.

^{23/} As noted, Working Group T1C1.3 considered some of these issues three years ago. See note 15 supra. At the time, it did not have the benefit of the INC technology and it did not attempt to address such issues as network harms or a standard interface jack.

standards setting organizations."^{24/} While the Commission has not commenced this inquiry, MTN, NWB and PNB believe that the time is now ripe to explore this subject. The need for this inquiry is demonstrated by the subject rulemaking petition: the Commission is being asked to adopt technology and media dependent proposals which would sanction CPE incompatibility and which would preclude registration of seemingly harmless CPE.^{25/} The issues are so complex and can affect so many industry members that Part 68 regulation should not be driven by a single petitioner and a handful of commenters.

In the interim, MTN, NWB and PNB believe that the Commission should continue its practice of referring technical issues to industry standards forums, if not adopt a general policy of requiring proposed amendments to Part 68 to be submitted to those bodies before it will entertain any regulatory relief.^{26/}

CONCLUSION

^{24/} Docket 81-216 Second Report, 49 Fed. Reg. 48714, 48718 at ¶ 20 (Dec. 14, 1984).

^{25/} The need for this inquiry is also demonstrated by the petition filed by Electronic Data Systems. See Public Notice, Report No. 1686, released October 30, 1987. See also "Part 68 Is Not Compatible with ONA," Telecommunications, January, 1987, at 8

^{26/} Of course, the Commission must always be available in the first instance to entertain situations involving immediate or grave harms.

There have been enormous changes in the telecommunications industry since Part 68 was first promulgated:

- ANSI-accredited industry standards organizations have been formed;
- No one entity dominates the standards setting process;
- Exchange carriers are no longer resisting direct connection of CPE to their networks; and
- With the deployment of new technologies (e.g., optical fiber), public switched networks are becoming increasingly immune to potential harms generated by poorly designed or improperly manufactured CPE.

In these circumstances, the Commission should exercise caution before expanding the scope of Part 68 to encompass an entirely new class of CPE in connection with an entirely new service -- particularly since Part 68 was intended to be a transitory regulatory regime only.^{27/}

As MTN, NWB and PNB see it, the Commission has two choices with respect to the Ameritech Petition. First, it can adopt the proposals even though there is no quantification of the severity of the potential harm nor any guarantee that crosstalk will be eliminated by their adoption. If this approach is followed, the

^{27/} See Docket 19528 First Report on Reconsideration, 57 F.C.C.2d 1216, 1229-30 (1976)(separate statement of Chairman Wiley, joined by Commissioners Reid, Washburn, Quello and Robinson).

MTN, NWB and PNB cannot agree with Ameritech that the Commission should "act quickly" on its request. Ameritech Petition at 6. Ameritech chose to wait two years before submitting Bellcore's proposals and even chose to begin to offer PSDS without the protection of Part 68.


Commission must be ready to entertain additional rulemaking petitions as other vendors using different technologies seek to amend Part 68 to accommodate their product (e.g., INC's units). Second, it can refer the PSDS interface issue to Committee T1 for its review and recommendation.

In MTN, NWB and PNB's view, the answer is apparent. Committee T1 has access to the expertise and procedures necessary to tackle the difficult technical issues raised by Ameritech in its Petition.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify on this 9th day of December, 1987, that I have caused a copy of the foregoing OPPOSITION to be mailed via first class United States mail, postage prepaid, to the persons named below.


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